Stood

Installation Manual

Revision E

Ellidiss Technologies
http://www.ellidiss.com

1 Install the software

This section explains how to install **Stood 5.3** on your system. This version of the software is a 32 bits application that may run on a **Windows** or **Unix** (**Solaris** or **Linux)** platform, but the software must be installed on a local or a remote file system first. Following configurations are supported:

- local installation on a standalone **Windows PC**.
- network installation on an **Windows** server, for **Windows** only client platforms.
- local installation on a standalone **Unix** platform.
- network installation on an **Unix** server for **Windows** and **Unix** client platforms.

There are no strong constraints as regards to the location of the software on the file system. The installation procedure does not require privileged rights unless you are accessing protected directories. Here are a few recommendations:

- `bin.xxx`, `sbprolog` and examples directories should be stored in an area shared by all the users of **Stood**.
- `config` directory should be stored in an area shared by all the members of a same **Project**.
- `stood.ini` or `.stoodrc` files may be customized by each user and located in their own working directories.

1.1 Distribution media

The software may be delivered in several ways:

- download from the Internet
- on a **CD-Rom** or a **USB** stick

If **Internet** access is available on your system, you can download **Stood** from the main **Ellidiss** web site:

```
http://www.ellidiss.com
```

Additional information about Stood is available on the technical support web site:

```
http://www.ellidiss.fr
```

Otherwise, if you have received a **CD-Rom** or a **USB** stick, the required installation files should be directly copied from this disk, after it has been properly mounted on your system.

For any other questions or information, please contact the **Stood** technical support using the following email address:

```
stood@ellidiss.com
```

1.2 Distribution contents

The archive files that come with the **Stood** distribution are named as follow:

- `Stood54Windows.exe`: auto extractible setup file to install **Stood** locally on a **PC** running **Windows XP**, **Vista**, **Windows 7** or **Windows 8**.
- `Stood54Linux.tar.gz`: compressed archive containing the distribution files for **PC Linux** platforms.
- `Stood54Solaris.tar.gz`: compressed archive containing the distribution files for **Sun Solaris2** platforms.

The following chapters describe the installation procedure to be followed after the appropriate components have been copied to your system. Once installed (i.e. having executed the installation program under **Windows** or uncompressed the installation archive under **Linux** or **Solaris**), a typical installed distribution contains the following directories:

- `bin.w32`: binary files for **PC Windows**
- `bin.l32`: binary files for **PC Linux**
- `bin.sol2`: binary files for **Sun Sparc Solaris**
- `bin.common`: java archive files, used by the **Marzhin** simulator only
- `config` : **HOOD** configuration files for all platforms
- `config_AADL` : **AADL** configuration files for all platforms
- `sbprolog` : prolog engine and libraries used by **LMP** tools
- `bash` : a **Unix** shell subset, required for **Windows** installation only
- `examples` : a few **HOOD** design examples for **Ada**, **C** and **C++**
- `examples_AADL` : a few examples of **AADL** projects
- `examples_libs` : a few libraries to be used with the **HOOD** examples
- `documentation` : manuals

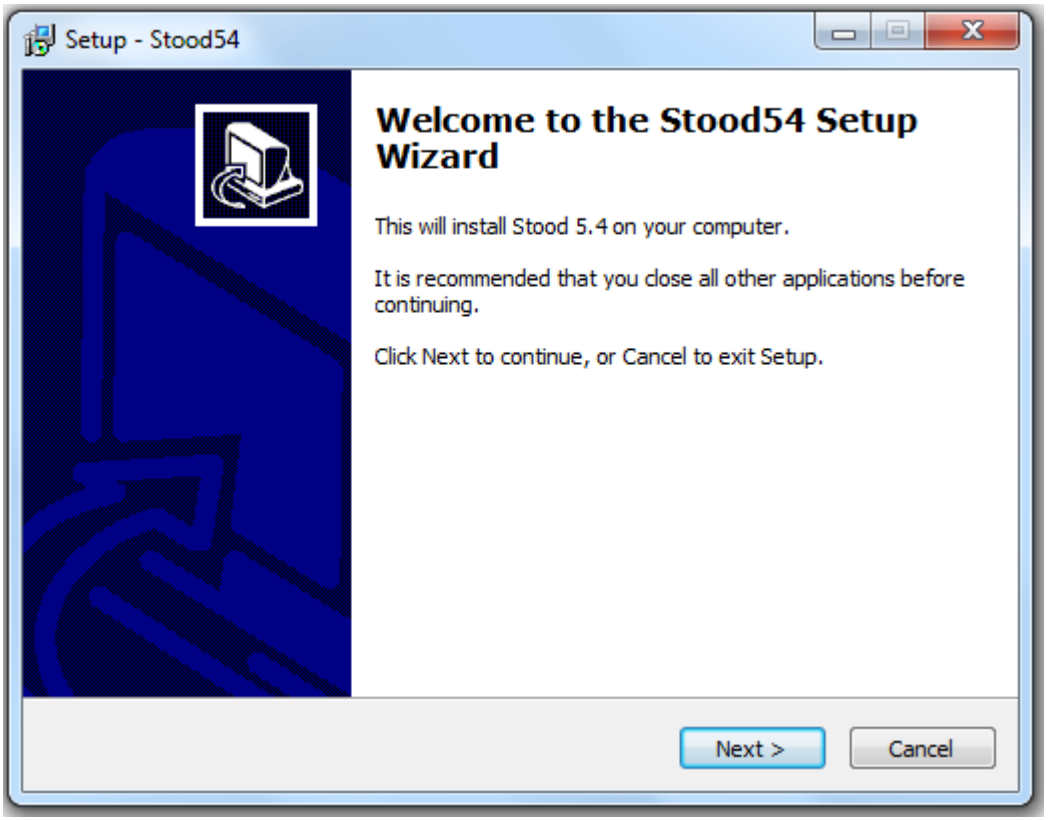
1.3 Installation on a Windows PC

WARNING: Before installing **Stood** on **Windows**, please take care to uninstall any previously installed version of the product on the **PC**.

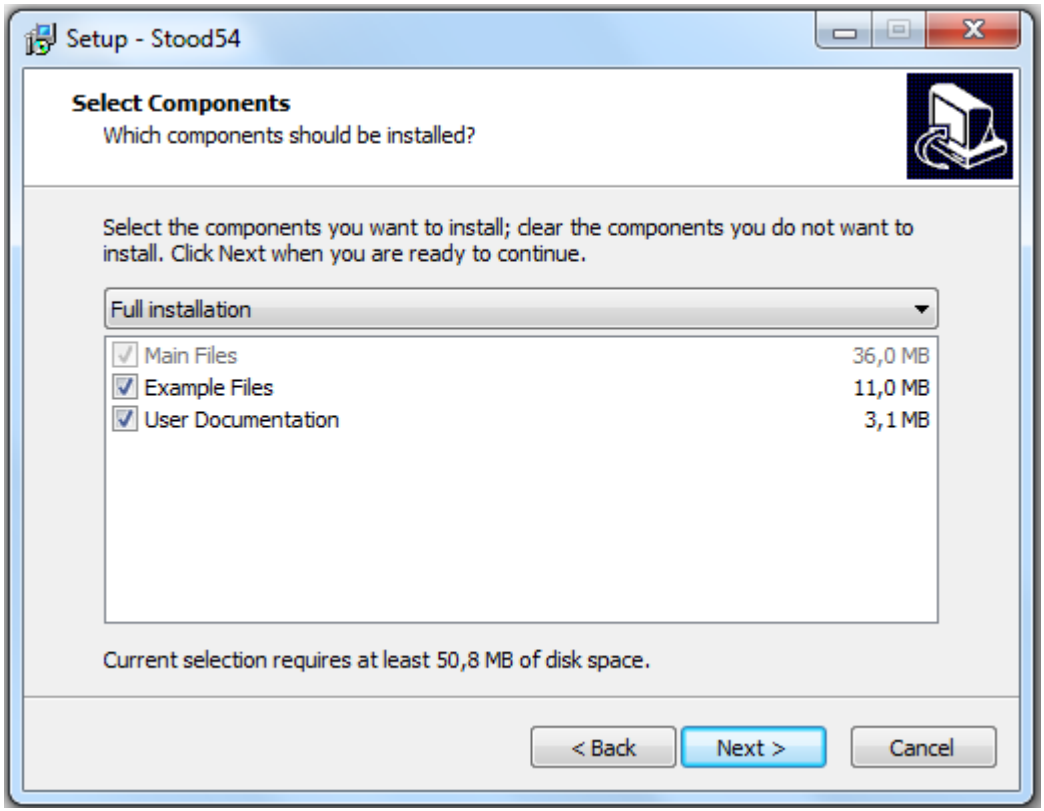
To install **Stood** on a **Windows** network, or a standalone **Windows PC**, execute the following auto extractible archive file:

```
Stood54Windows.exe
```

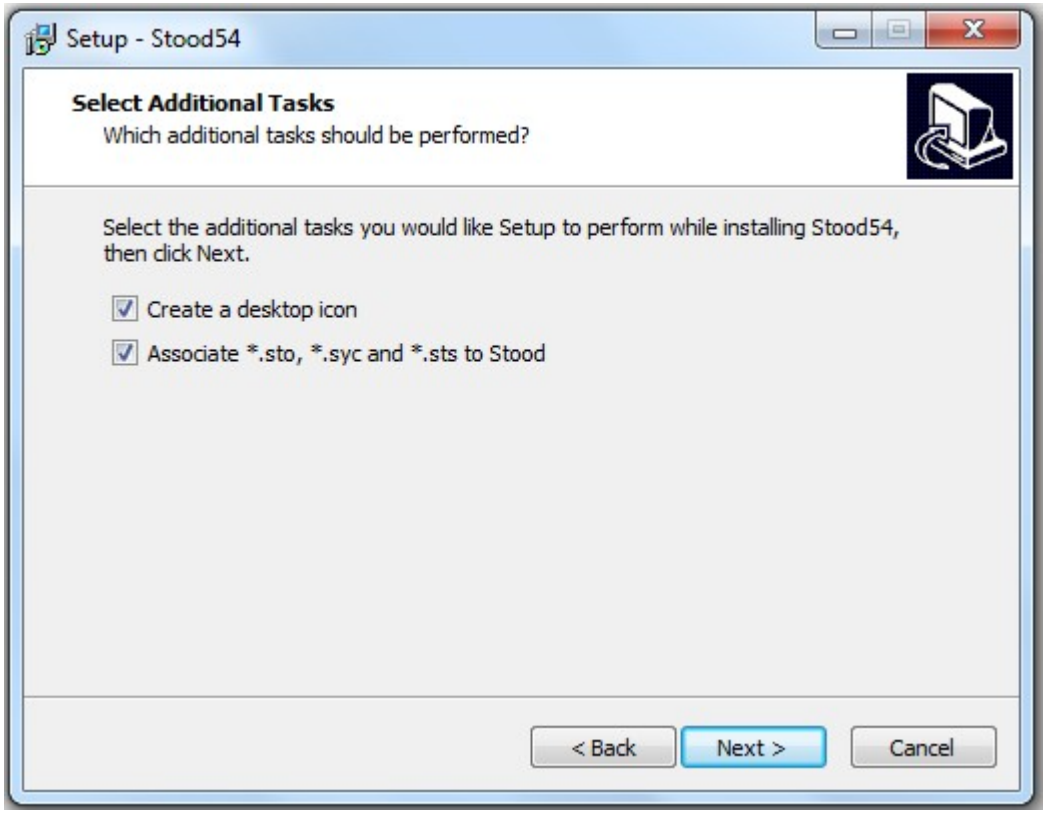
A setup dialog window should appear. Please follow the instructions to go forwards with the installation procedure.


Setup - Stood54
Welcome to the Stood54 Setup Wizard
This will install Stood 5.4 on your computer.
It is recommended that you close all other applications before continuing.
Click Next to continue, or Cancel to exit Setup.
Next >
Cancel

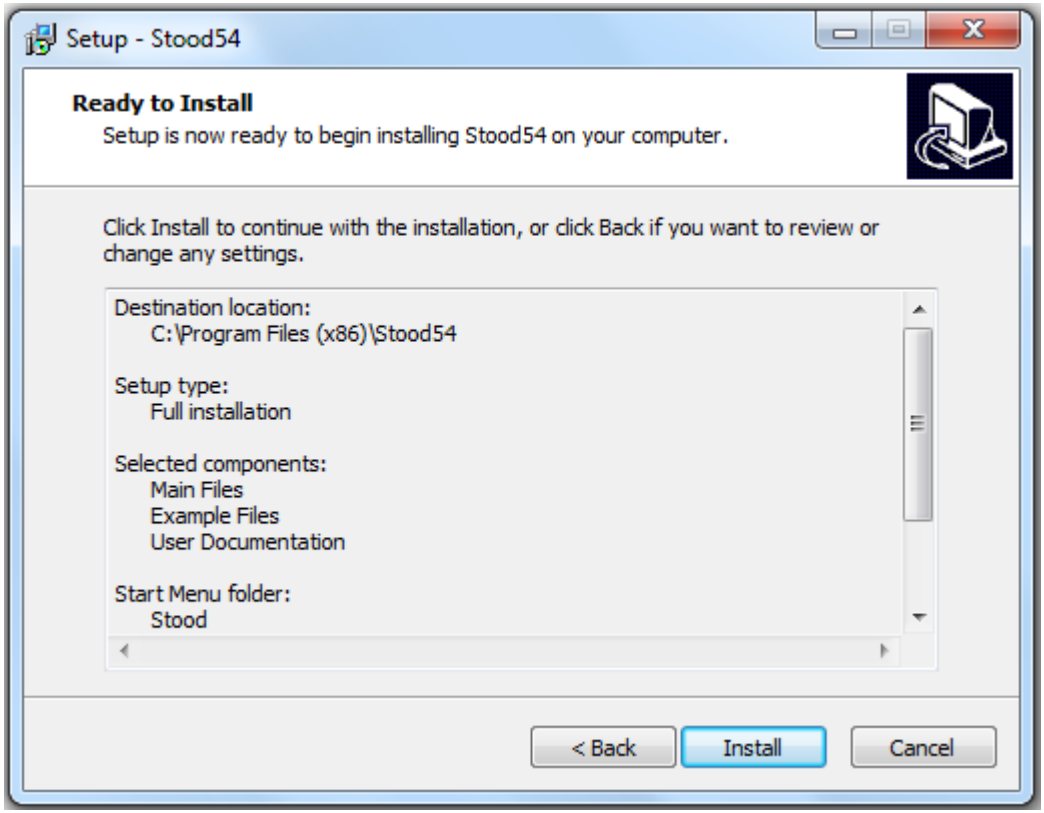
The distribution includes optional packages containing a few examples and user documentation. These examples are not mandatory and do not affect the use of **Stood**. They can be removed from the list to save disk space.


Setup - Stood54
Select Components
Which components should be installed?
Select the components you want to install; clear the components you do not want to install. Click Next when you are ready to continue.
Full installation
Main Files 36,0 MB
Example Files 11,0 MB
User Documentation 3,1 MB
Current selection requires at least 50,8 MB of disk space.
< Back
Next >
Cancel

Note that disk sizes shown in the previous screen shots may differ from the actual ones.


Setup - Stood54
Select Additional Tasks
Which additional tasks should be performed?
Select the additional tasks you would like Setup to perform while installing Stood54, then click Next.
Create a desktop icon
Associate *.sto, *.syc and *.sts to Stood
< Back
Next >
Cancel

A few **Windows** file types may be associated to **Stood** during the installation process. When double-clicking on them, the following action will occur: `*.syc` opens **Stood** and loads the corresponding **Project**. `*.sto` opens **Stood** and loads the **Design** of selected `Stood.sto`. `*.sts` opens **Stood** and executes the corresponding **STShell** script.



Clicking on the install button will complete the installation procedure.

1.4 Installation on a Solaris workstation or Linux PC

To install **Stood** on a **Unix** network server, or on a standalone **Solaris** workstation or **Linux PC**, please first get access to the appropriate components from the selected remote file server, or standalone workstation:

```
Stood54Solaris.tar.gz or Stood54Linux.tar.gz
```

Change directory so that you are where **Stood** has to be installed. Super user rights are not required, except if the software has to be installed in a protected directory:

```
cd installation_directory
```

Then, uncompress and expand each selected `file.tar.gz` file as follow:

```
gunzip file.tar.gz
tar xvf file.tar
```

Around 30 Megabytes of free disk space is required on the server for a single platform target. Note that the various binaries may be installed on the server. Each additional bin directory will use around 5 Megabytes on the disk, and all the other distribution directories may be installed only once, and will be shared.

Depending on the actual configuration of the **Linux** distribution, the following additional actions may be required:

- Installing the 32 bits compatibility package (`ia32-libs`)
- Installing the **OpenMotif** package (`libXm.so`)
- Installing `csh`
- Installing **X11** fonts (75 dpi and 100 dpi)

As soon as all the transferred files are expanded, the installation is completed. **Stood** may be launched in demonstration mode without any further action:

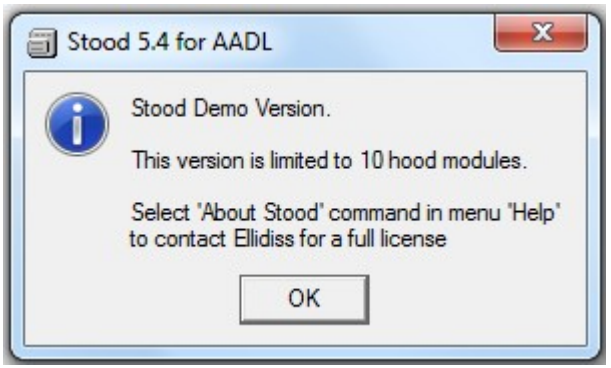
```
bin.xxx/stood
```

2 Install the license key

Except for the demonstration mode, **Stood** requires a proper user license and its associated software key to operate properly.

2.1 Demonstration mode

If no license key has been installed (default configuration), or if the number of used sharable tokens is exceeded, **Stood** runs in demonstration mode. In this case, you are limited to 10 **Components**.


Stood 5.4 for AADL
Stood Demo Version.
This version is limited to 10 hood modules.
Select 'About Stood' command in menu 'Help'
to contact Ellidiss for a full license
OK

Please note that the demonstration mode should be restricted to discovery and educational purposes, else it denotes the lack of a proper user license for the software, and no guarantee is given by **Ellidiss** while using **Stood** in demonstration mode.

2.2 Time-limited licenses

A time-limited software license key may be installed in order to enable a fully featured use of **Stood** until a given date. This software license key must be inserted inside the `stood.ini` (for **Windows** platforms) or `.stoodrc` (for **Unix** platforms) initialization file.

On a **Windows PC**, the time-limited license key information looks like the following:

```
[Licensing]
Organization=Company_Name
Licensee=User_Name
LicenseCount=1
Mode=Full
ExpirationDate=31/12/2013
Password=1234567
```

On a **Unix** platform (**Solaris** workstation or **Linux PC**), the same time-limited license key information looks like the following:

```
Licensing.Organization:Company_Name
Licensing.Licensee:User_Name
Licensing.LicenseCount:1
Licensing.Mode:Full
Licensing.ExpirationDate:31/12/2013
Licensing.Password:1234567
```

2.3 Network shared licenses

A license file may be installed on a **Windows** or **Unix** network server, in order to make floating license tokens available to any connected client. For this system to work properly, the remote server file must be visible from each client platform. The tool administrator must contact **Ellidiss** technical support to install a floating license tokens file on a network server, and users must add the following information inside the `stood.ini` (for **Windows** plartforms) or `.stoodrc` (for **Unix** platforms) initialization file on each client platform.

On a **Windows PC**, the network floating license key information looks as follows:

```
[NFL]
File=\\server\license\stood.nfl
ReleaseDelay=1440
```

Note that the specified directory must be actually shared on the network. For instance, check that the two options "*Share this folder on the network*" and "*Allow network users*

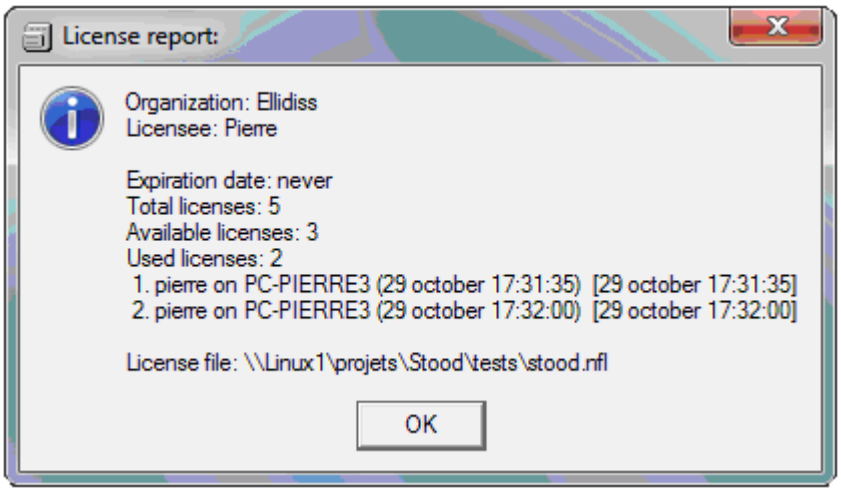
to change my files" are set in the properties of the directory. The way to configure these options may change according to the version of **Windows** you are using.

On a **Solaris** workstation or **Linux PC**, the same network floating license key information looks as follows:

```
NFL.File://server/license/stood.nfl
NFL.ReleaseDelay:15
```

Note that the specified directory must be properly mounted on the **NFS** server in order to be visible across the network. In addition, please check that both the directory and the `.nflfile` have read and write access for any **Stood** user.

When **Stood** is running, information about actually used license tokens may be obtained with *Help/About license...* menu of the main window:



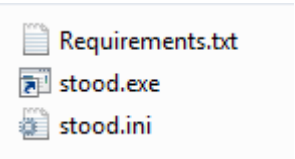
3 Quick start guide

After installing the software and its license, **Stood** may be used, and all its features are ready for **AADL** or **HOOD** architectural and detailed design activities. This document provides some basic information on using the tool so that if you are new to **Stood** you can get started.

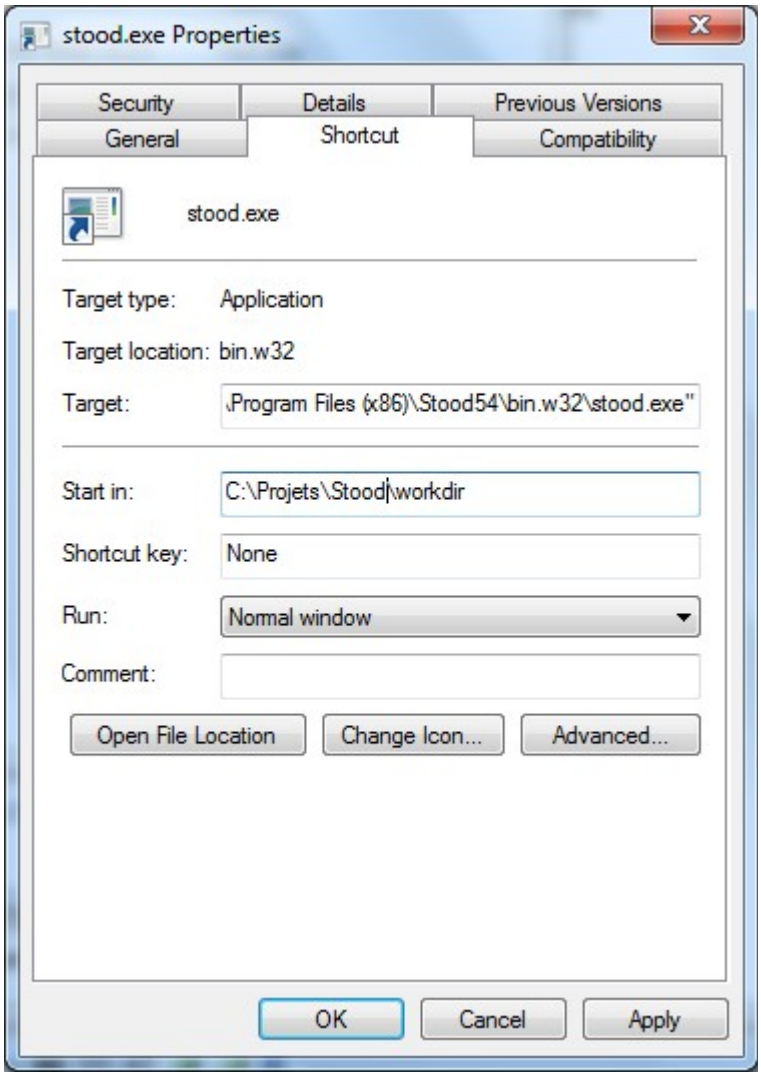
This quick start guide assumes that you are using a standard standalone installation on a **Windows PC**. Please note that there may be a few differences if you are using a **Unix** version, or a network installation.

3.1 Launch Stood

The standard installation creates two shortcuts for **Stood** in the **Windows** startup menu (*Stood for HOOD* and *Stood for AADL*), and one on the desktop (*Stood for AADL*). It is however recommended that you create a working directory and add a shortcut to the installed **Stood** executable, for example:



Edit the shortcut properties and set the startup directory field to the working directory you have created. This means that each time **Stood** is executed using this shortcut, any newly created **Projects** and **Designs** will be stored in your working directory.



A local initialization file (`stood.ini`) may be created in your working directory. This file should only contain the properties that differ from the standard configuration. These properties will overload the default ones if **Stood** is executed from the working directory.

```
[General]
Welcome=Stood and AADL Inspector test environment

[Environment]
OSATE_PATH=/cygdrive/C/Projets/Osate2/osate.exe

[NFL]
File=\\Linux1\projets\Stood\tests\stood.nfl
ReleaseDelay=1440
```

The working directory can be referenced inside the initialization files, using the local environment variable `$WORKDIR`. In a similar way, the variable `$TOOL` refers to the installation directory. A property in these initialization files specifies the storage locations for **Stood** Systems and **Designs**. The default setting for this property is either:

```
SavePath=$WORKDIR,$TOOL\libs,$TOOL\examples
```

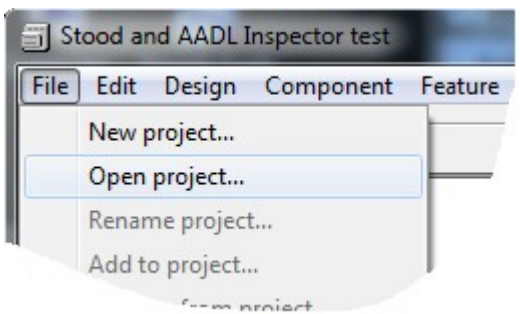
or

```
SavePath=$WORKDIR,$TOOL\libs,$TOOL\examples_AADL
```

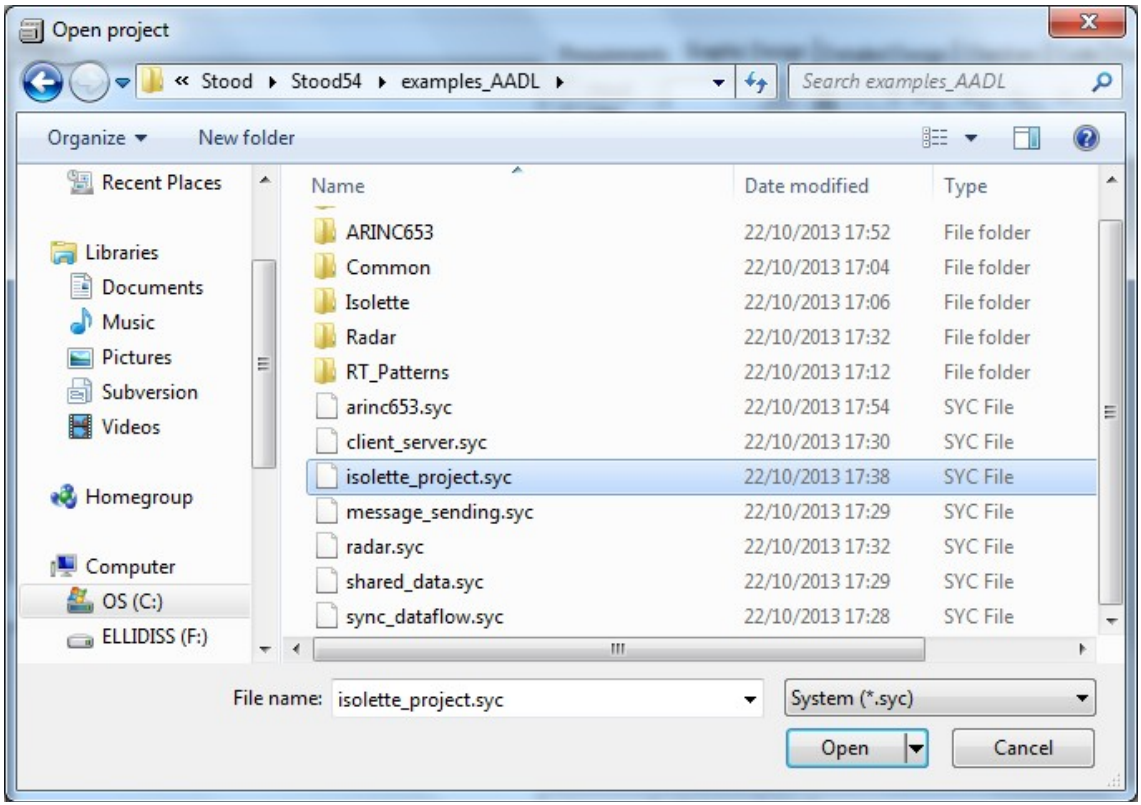
It can be customized in a user's initialization file to get access to other directories.

3.2 View the examples

To open the examples that are available when installing the product, perform the following steps:



This opens a standard file selector. Navigate to the examples directory and select a `.syc` file. This will load the corresponding example.



3.3 Create a new Design

A **Project** is composed of several sharable **Designs** (your current application, reusable components, libraries, other sub-systems, ...). When opening **Stood** for the first time, only the predefined **Project** examples are available. To create a new **Project**, select the *New project...* option from the *File* menu and give it a name in the displayed dialog box:

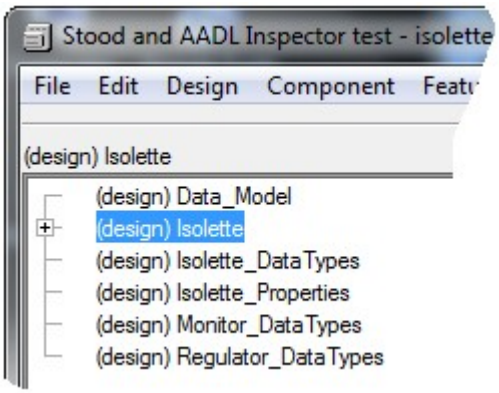
The created **Project**, however does not contain any data yet. To reference already existing **Designs**, select the *Add to project ...* option from the *File* menu, and select the chosen `Stood.sto` file from the file selector.

To create a new **Design**, select the *New design ...* option from the *Design* menu. Several options are available:

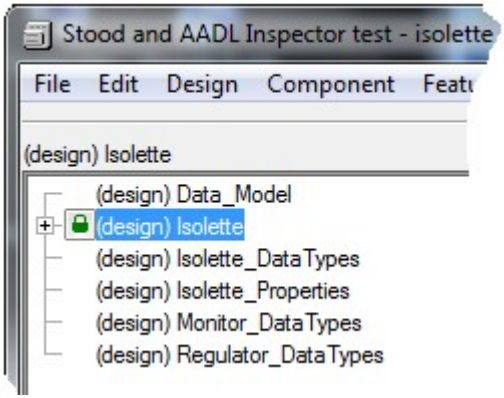
- **HOOD** designs: select *design*, *generic* or *virtual node*
- **AADL** designs: select *package*, *system*, *process* or *processor*

The corresponding entry will appear in the **Designs** list of the **Project**.

A single click on the name in the list, loads the **Design** in read-only mode. To load it in read-write mode, double-click the name or select the *Lock design* option from the *Design* menu. When loaded in read-write mode, a green padlock is shown near the **Design** name. This means that nobody else can open it in read-write mode.



loaded "*read only*"



loaded "*read write*"

The software design activities may now start. The following features are supported by **Stood 5.4**:

- import software requirements
- reverse engineer legacy **AADL** models, or **Ada** or **C** source code
- perform architectural design activities graphically
- achieve complete detailed design and coding
- apply internal or remote model verification tools
- use code generators to producer **AADL**, **Ada**, **C** or **C++** source code
- generate design documentation in **HTML**, **PDF**, **RTF**, **ODT**,... .

When the **AADL** code generator is used, the embedded **AADL Inspector** companion tool is automatically launched and provides a set of **AADL** processing tools such as **Cheddar** for schedulability analysis and **Marzhin** for dynamic run-time simulation.

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